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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/456,806	12/08/1999	YUNG-CHING SHA	SHA-2	6937

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EXAMINER
BLOUNT, STEVEN

ART UNIT	PAPER NUMBER
2661	2

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PRG

P24

Office Action Summary

Application No.	Applicant(s)
09/456,806	Yung-ching Sha
Examiner	**Group Art Unit**
Blount	2661

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on 12/8/99.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-25 ~~is/~~are pending in the application.

Of the above claim(s)_____ is/are withdrawn from consideration.

☐ Claim(s)_____ is/are allowed.

☒ Claim(s) 1-25 is/are rejected.

☐ Claim(s)_____ ~~is/~~are objected to.

☐ Claim(s)_____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on_____ is ☐ approved ☐ disapproved.

☒ The drawing(s) filed on 12/8/99 is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number)_____.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received:_____.

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s)._____

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other_____

Office Action Summary

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Also, member 256 should be shown in figure 2, as it is referenced as being shown, and also because of the importance of this member to the disclosed invention.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 U.S.C. § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 18 is rejected under 35 U.S.C. 112 second paragraph for failing to particularly point out and claim the subject matter which applicant regards as their invention.

In claim 18, "said another I/O module" lacks antecedent basis.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 - 8, 10 - 17, and 19 - 25 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 5,870,382 to Tounai et al in view of U.S. patent 6,061,735 to Rogers.

With regard to claim 1, Tounai et al teach 1) a decision module (control module 5) for accepting stimulus from external (user) requests and internal messages related to the status of the protection and service lines as described in col 7 lines 20+ and col 8 lines 50+ and figure 5, in order to decide whether to change over ("The control means 5 controls the change over of the switch 4. By this, the firmware can autonomously perform the APS"; col 7, lines 30 - 33); 2) service and protection lines W - P and W - S (fig 1), and 3) control module 5 for setting and receiving (receiving presumably in registers) bytes with information regarding the status of the service and protection lines with respect to their failure/non-failure (see col 3 lines 40+); and also in control module 5, apparatus for comparing the values stored for the two bytes K1 and K2 to determine whether to switch over from the service to protection line, or vice - versa as is taught in col 13, lines 10+.

Tounai et al does not however teach 1) separate modules for the comparison of byte values, and the setting of them; or, 2) in control module 5, that there is a memory element that stores a last-provided user-specified directive.

1) It is would be obvious to have the control module 5 be comprised of more than one module for the separate decision functions in view of the fact that Tounai et al is already comprised of modular construction (see figure 11, for example) and the fact that it is well known in the art of electronics to separate different functions into different modules.

2) Rogers teaches providing a "user-provided directive" to the system in a similar manner as the external requests discussed in Tounai et al, and also teaches that there is a threshold that "is a predetermined number of spare segments that the network administrator defines, so that a complete plan regeneration only occurs when enough spare segments have been added to warrant the complete regeneration". See col 5, lines 45+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Tounai et al with a means for storing information from a user-defined input which sets a threshold value for a parameter, to be inserted into the control module 5 of Tounai et al as an external request along with status information concerning the service and protection lines (as discussed above), in light of the teachings of Rogers, in order to provide a failure protection system that has the capability of maintaining continuity with respect to the conditions that trigger the changeover over time.

Unless noted otherwise, all references in the following rejections refer to Tounai et al.

With regard to claims 2 - 3, the apparatus discussed above is stored in the control unit 5 (processor), and such units are well known to operate under program control and software instructions stored in a memory element contained in an associated memory.

With regard to claim 4, col 7 teaches external request of "lockout" and, in figure 4, it is seen that "forced switch" is an alternative.

With regard to claim 5, failure and degradation states for K1 byte are shown in fig. 2.

With regard to claim 6, conversion from standby to active (and vice-versa) is discussed in the abstract and lines 30+, and further note the obviousness discussion relating to using 1 module as opposed to 2 or more.

With regard to claim 7, the abstract and col 3 lines 30+ discuss changeover (to active side) when decision is to place the protection line in standby mode.

With regard to claim 8, module 3 in figure 1 is essentially an I/O module.

With regard to claim 19, priority of switch commands is taught in col 8, lines 60+.

With regard to claim 20, see the discussion of Rogers as to the "last-provided user specified directive" (and col 7 lines 25+ of Tounai et al) and also the rejection of claim 19 as to the hierarchial order of the stimuli.

With regard to claim 21, the K bytes are comprised of two sections with 4 bits in each of them. See col 7 lines 10+.

With regard to claim 22, the choice of the codes used for the service lines memory units is arbitrary and one of ordinary skill in the art would find it obvious to select these claimed values as compared to any other values.

With regard to claim 23, see the rejection of claim 1 above, and note the following:

the receiving of a stimulus to change status of service or protection line, col 7 lines 20+ and col 8 lines 50+ and figure 5 as discussed above; deciding whether to accept/reject stimulus and resetting bit values: control module 5 for setting and receiving (receiving presumably in registers) bytes with information regarding the status of the service and protection lines with respect to their failure/non-failure (see col 3 lines 40+); comparing bit values: col 13, lines 10+; finally, note that while Tounai et al teaches implementing switch - over depending on a comparison between the values stored in the K values as discussed in col 13 lines 10+, it is not stated that the action taken depends on one of the values being greater than the other, but rather a match between the values, the difference in operation chosen is an obvious variation whereinn one skilled in the art would realise that any of the results of the comparison (greater than, equal to, or less than) could be chosen to signify that change-over should occur, depending simply on the values chosen to set the bits with.

With regard to claim 24, as noted above, the K bytes are 8 bits each.

With regard to claim 25, choice of codes chosen is arbitrary and one skilled in the art would have found it obvious to use these values as opposed to any other values. Further, figure 2 has faules for failure, deterioration, and external requests.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 5,870,382 to Tounai et al in view of U.S. patent 6,061,735 to Rogers as applied to claim 8 above, and further in view of applicants admitted prior art (hereinafter referred to as AAPA).

Tounai et al/Rogers teaches the invention as discussed above, but do not teach having a framer connected to a protection line in I/O module 3. Such a framer connected to line interface units 110 is taught in figure 1 of AAPA. It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Tounai et al/Rogers with a framer in module 3, in light of the teachings of AAPA, in order to place the cells in proper format before sending them out to the atm networks on either side of first and second equipment 10.

7. Claim 18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Contact Information

8. Examiner Blount may be contacted at the Patent Office between the hours of 9:00 am to 5:30 P.M. Monday through Friday. His phone number is (703) 305-0319.

SB

3/18/03